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**GLT-500 / GLT-500-1**  
**GLT-AT500 / GLT-AT500-1**  
**MSHA Approved Continuity Ground**  
**Monitors with**  
**Ground Lock Technology™**



**Ground Lock Technology™ (GLT): Revolutionary technology that precisely monitors ground currents much more accurately and reliably than old-school methods used in other continuity ground monitors.**

The GLT-500 family of products are state-of-the-art, fail-safe, continuity ground monitors (GMs) for use in low, medium and high voltage applications. These GMs feature patented Ground Lock Technology™.

**MSHA Approved:** These ground monitors are MSHA approved for LV/MV mining installations that require MSHA certified ground monitoring (e.g. US coal mines). Unlike most ground monitors in use today, the GLT's meet all *current* MSHA testing standards (CFR 30 Parts 75, 77, MSHA documents ASTP 2135 and ACRI 2003).

The GLT-500 family includes two mechanical configurations: The full-chassis GLT-500/-AT500 are mechanically and electrically compatible (pin-to-pin) with popular GMs that have been in use for decades, so an upgrade is as simple as removing the old unit, and installing the GLT monitor in its place. The open frame design (GLT-500-1/-AT500-1) is electrically compatible with similar existing products, but has a different mechanical profile. The two configurations are electronically identical, except the full chassis versions have an extra latching indicator breaker feature.

The GLT-500 monitors are designed for power systems with system voltages up to 5kV.

A typical installation includes the GLT-500 monitor, a high-voltage terminating Pilot Wire Device (PWD), and a suitable Ground Wire Device (GWD). A specially designed Intermountain Electronics PWD (PN 1020-0051) is included with each GLT ground monitor.

The GLT-500 GMs have been designed to work with a variety of coil and diode type GWDs. Generally, when using a diode type GWD (with GLT-500, GLT-500-1), the current transformer will be integrated with the GWD. However, when using a coil-type GWD (with GLT-AT500, GLT-AT500-1), the current transformer is not integrated into the GWD, and must be procured and mounted separately.

Depending on the regulations for the location and application, MSHA approved GWDs may or may not be required. For non-MSHA applications, IE GWDs are recommended (see below). Where MSHA approvals are required, please contact IE for recommendations.

<u>Model</u>	<u>Recommended GWD / CT</u> (MSHA approval not required)	<u>Recommended GWD / CT</u> (MSHA approval required)
GLT-500 GLT-500-1	1100-6020 GWD with Integrated Current Transformer	Contact IE for recommendations
GLT-AT500 GLT-AT500-1	Current Transformer: IE PN 2000-0308 GWD: IE PN 1100-6010	Current Transformer: IE PN 2000-0308 GWD: Contact IE for recommendations

### **Features**

- GLT Technology™ for improved ground monitoring and reliability
- Rugged mechanical construction, sealed from the elements (full chassis version)
- MSHA approved
- Fail-safe design
- Modern electronic design, utilizing up-to-date, reliable components
- Accessory port for enhanced connectivity/expandability
- Easy upgrade: GLT-500/AT500 is fully reverse compatible with older GMs
- All models designed for use in power systems operating at up to 5kV
- Available in full chassis and open frame versions

### **Specifications**

**Control Voltage:** 120VAC, 60 Hz. Nominal power draw is 25W

**Impedance Trip Level:** No greater than 50 ohms (45 ohms nominal)

**System Voltage:** Up to 5kV

**Required PWD (included):** IE part number 1020-0051

**Recommended GWD/CT:** (See table above)

**Weight (Ground Monitor / PWD Only):**

GLT-500/-AT500: 5.9 lbs / 2.7 kg

GLT-500-1/AT500-1: 4.7 lbs / 2.1 kg

**US Pat. Numbers: 9,124,089, 9,172,234, 9,197,055**

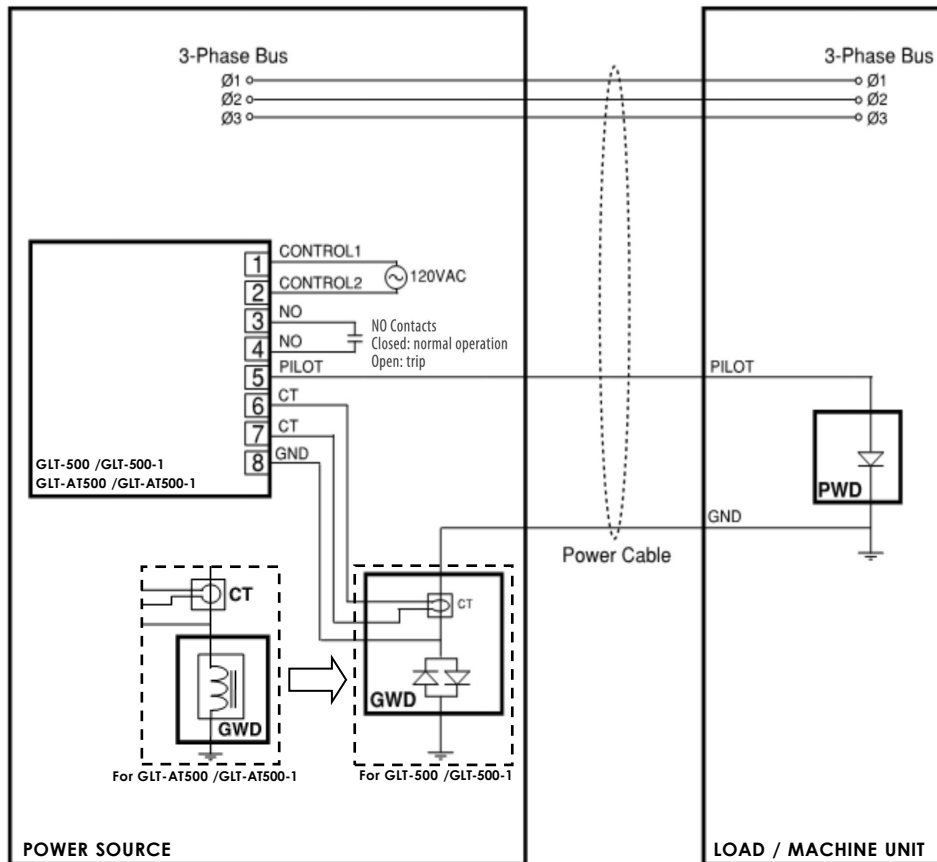


**Front / Rear View  
GLT-500 / GLT-AT500**



**Face Plate / Bottom View  
GLT-500-1 / GLT-AT-500-1**

### Typical Installation



### Ordering information

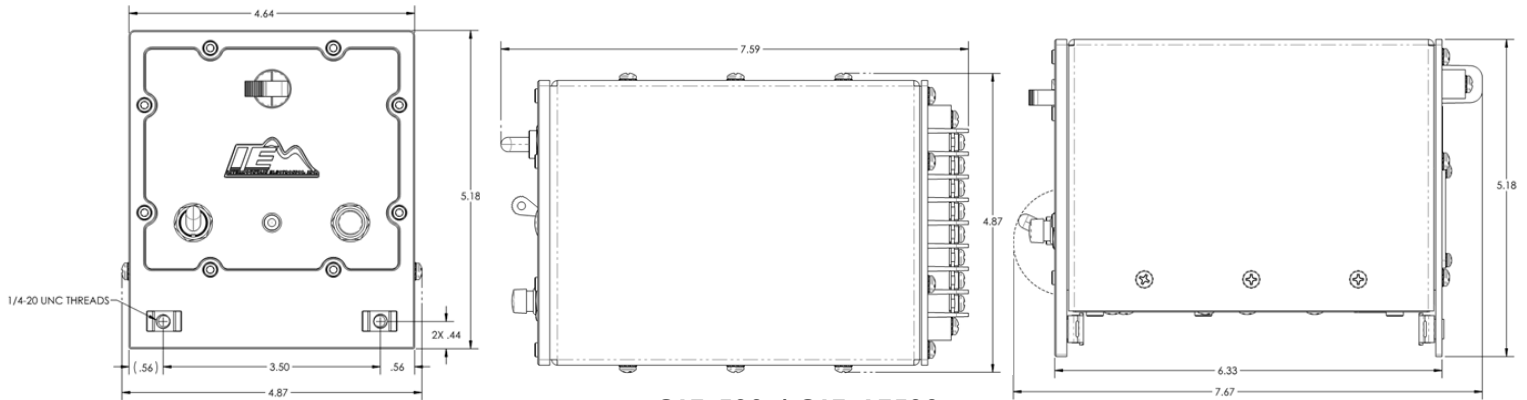
Model	Part #	Description
GLT-500	1100-1000	GLT-500 Ground Monitor with 1020-0051 PWD (Requires Diode GWD)
GLT-500 w/ 1100-7100	1100-1000-E7100	GLT-500 / 1020-0051 PWD with 1100-7100 Exp. Module Installed (Requires Diode GWD)
GLT-500 w/ 1100-7110	1100-1000-E7110	GLT-500 / 1020-0051 PWD with 1100-7110 Exp. Module Installed (Requires Diode GWD)
GLT-500 Combo	1100-1007	GLT-500 / 1020-0051 PWD with 1100-6020 GWD (for non-MSHA applications)
GLT-500 MSHA Combo	1100-1008	GLT-500 / 1020-0051 PWD with MSHA Approved Diode GWD (for MSHA applications)
GLT-500-1	1100-1002	GLT-500-1 Open Chassis Ground Monitor with 1020-0051 PWD (Requires Diode GWD)
GLT-AT500	1100-1020	GLT-AT500 Ground Monitor with 1020-0051 PWD (Requires Diode GWD & CT)
GLT-AT500 w/ 1100-7100	1100-1020-E7100	GLT-AT500 / 1020-0051 PWD with 1100-7100 Exp. Module Installed (Requires Diode GWD & CT)
GLT-AT500 w/ 1100-7110	1100-1020-E7110	GLT-AT500 / 1020-0051 PWD with 1100-7110 Exp. Module Installed (Requires Diode GWD & CT)
GLT-AT500 Combo	1100-1027	GLT-AT500 / 1020-0051 PWD with 1100-6010 GWD and 2000-0308 CT (for non-MSHA applications)
GLT-AT500 MSHA Combo	1100-1028	GLT-AT500 / 1020-0051 PWD with MSHA Approved Diode GWD & 2000-0308 CT (for MSHA applications)
GLT-AT500-1	1100-1022	GLT-AT500-1 Open Chassis Ground Monitor with 1020-0051 PWD (Requires Diode GWD & CT)

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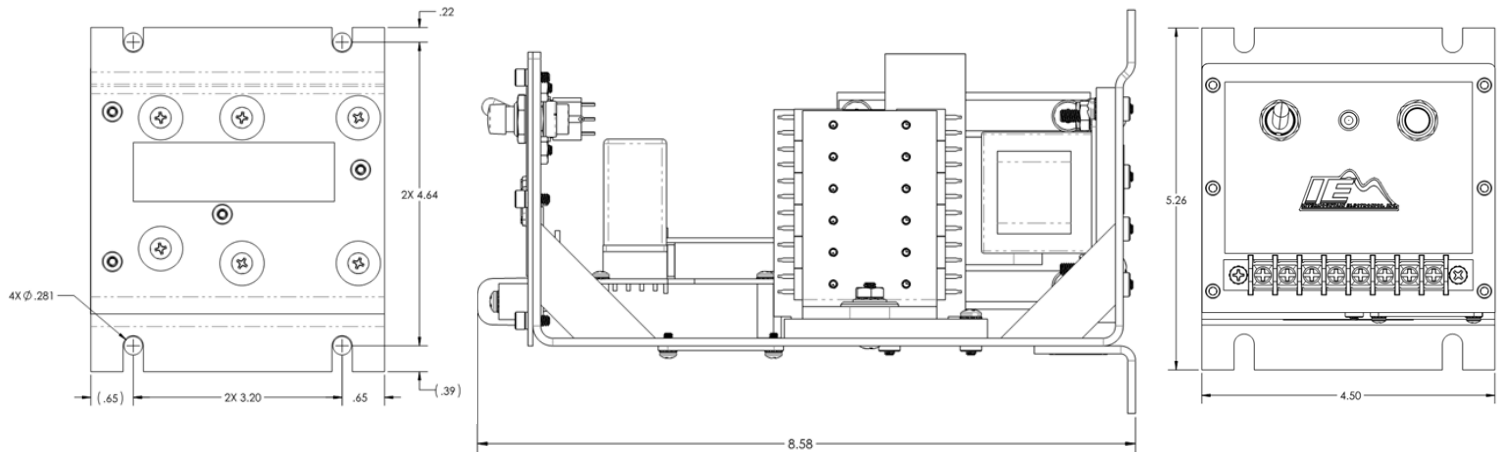


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## Mechanical Dimensions



GLT-500 / GLT-AT500



GLT-500-1 / GLT-AT500-1

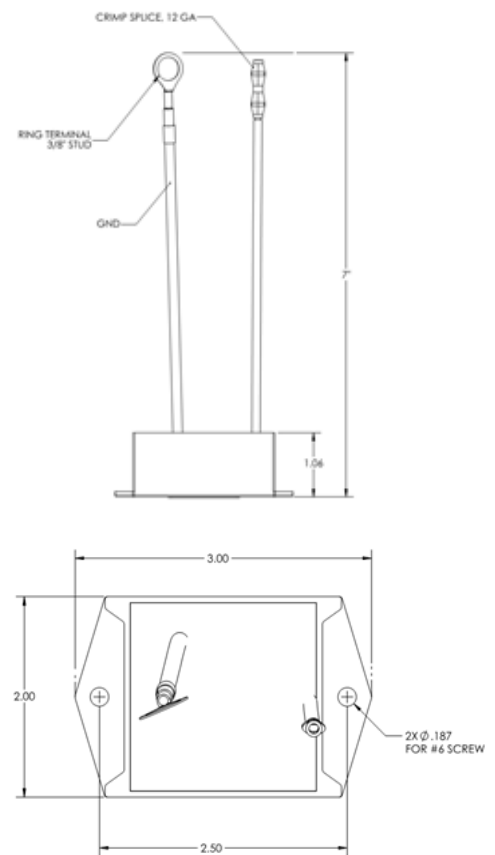
### Important Notice:

This document contains information intended to aid in the proper installation and operation of the product described. Although this information will prove useful to the properly trained and qualified user, it is not practical to cover every possible situation, installation contingency, or other detail.

It is imperative that proper engineering and techniques are adhered to in the installation, operation, and maintenance of this product. It is the responsibility of the user to ensure that any system utilizing this product is safe, and that all personnel involved with the selection, installation, maintenance, and use of this product are properly qualified. This product must not be used in situations where its ratings are exceeded.

While every effort has been made to make sure the information in this document is accurate, IE cannot guarantee that there are no errors. Users of this product should independently verify any aspects of the product's design or performance that are critical to their application, and in particular, any aspects that may affect the safety of the overall system or installation.

Product design and specifications may change without notice.



1020-0051 PWD

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